

REMARKS/ARGUMENTS

The Examiner is thanked for the Office Action mailed August 31, 2009. The status of the application is as follows:

- Claims 1-20 are pending;
- Claims 15 and 16 are rejected under 35 U.S.C. 112, second paragraph;
- Claims 1, 3, 4, 11, 17, 18 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Reining et al. (US 6,359,449);
- Claims 2, 5-10 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reining et al. in view of Kasai (US 5,760,688); and
- Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reining et al. in view of Brand et al. (US 4,829,285).

The rejections are discussed below.

The Rejection of Claims 15 and 16 under 35 U.S.C. 112, Second Paragraph

Claims 15 and 16 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as their invention. In particular, the Office asserts that elements of claims 15 and 16 are inherent and do not further limit independent claim 1.

“To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.’” (See MPEP 2112 citing *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999)). “In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art.” (*Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990)). The Office has failed to show that claims 15 and 16 are inherent and do not further limit independent claim 1.

The Office has failed to provide a basis in fact or technical reasoning through extrinsic evidence teaching the elements of claim 15 and 16 as the Office only asserts that the elements of these claims are inherent.

Moreover, claims 15 and 16 further describe and define the scope and parameters of independent claim 1, in particular, claims 15 and 16 further define aspects of the resonant circuit recited in claim 1. The scope of claims 15 and 16 is different from the scope of independent claim 1, as claims 15 and 16 further narrow the scope of claim 1. The Office has failed to show that all resonant circuits comprise a feedback loop or a plurality of feedback loops. As such, the rejection of these claims should be withdrawn.

The Rejection of Claims 1, 3, 4, 11, 17, 18 and 20 under 35 U.S.C. 102(e)

Claims 1, 3, 4, 11, 17, 18 and 20 stand rejected under 35 U.S.C. 102(e) as being anticipated by Reining et al. This rejection should be withdrawn because Reining et al. does not teach each and every element as set forth in the subject claims and, therefore, does not anticipate claims 1, 3, 4, 11, 17, 18 and 20.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987). MPEP §2131.

Independent **claim 1** recites a system for noninvasive measuring of a conductivity in a volume, comprising, *inter alia*: power supply means arranged to ***provide a signal characteristic to a power loss of a resonant circuit*** upon an application of a magnetic field to a volume. Reining et al. fails to teach or suggest the above-emphasized claim element.

The Office asserts that providing a signal characteristic to a power loss is inherently present in any electric circuit. However, the fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. (See MPEP 2112 citing *In re Rijckaert*, 9 F.3d 1531, 1534 (Fed. Cir. 1993)). “To establish inherency, the extrinsic evidence ‘must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or

possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.” (See MPEP 2112 citing *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999)). “In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art.” (*Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990)).

The Office has failed to provide a basis in fact or technical reasoning through extrinsic evidence teaching providing a signal characteristic to a power loss of a resonant circuit, as the Office only asserts that *detecting* a power loss via a change in magnitude of a signal and that a loss in magnitude means a power loss or loss in signal. Claim 1 requires providing a signal characteristic to a power loss of a resonant circuit, not detecting a loss in magnitude or a loss in signal.

Furthermore, Reining et al. is silent regarding providing a signal characteristic to a power loss. Reining et al. instead discloses measuring conductivity of tissue via a resistance R_2 , which is defined as a decrease in a quality factor of an oscillator (see column 5, lines 43-45). The quality factor is further defined as indicating how long an oscillator would continue to oscillate without the input of additional energy (e.g., free oscillation) (see column 5, lines 55-58). The output current of the oscillator produces a signal 41, which represents the decrease is the quality factor, or the length of time for which free oscillation will occur. (see column 6, lines 44-49). The signal 41 is not characteristic to a power loss as the signal instead represents a time period of free oscillation.

Accordingly, the rejection of claim 1 should be withdrawn.

Independent **claims 3 and 11** recite aspects similar to those recited in claim 1. As such, the arguments made previously with regard to claim 1 apply mutatis mutandis to claims 3 and 11. Hence, the rejection of claims 3 and 11 should be withdrawn.

Claims 17, 18 and 20 depend from claims 3 and 11, respectively, and are allowable at least by virtue of their dependencies. As such, the rejection of claims 17, 18 and 20 should be withdrawn.

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Conclusion

In view of the foregoing, it is submitted that the claims distinguish patentably and non-obviously over the prior art of record. An early indication of allowability is earnestly solicited.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Katharyn E. Owen', with a long horizontal flourish extending to the right.

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